REMARKS

This is a full and timely response to the final Office Action of December 17, 1999. Reexamination, reconsideration, and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Second Response, claims 1-9 remain pending in this application, and claims 1 and 3 have been directly amended herein. It is believed that the foregoing amendments and additions add no new matter to the present application.

Furthermore, the amendments to claim 3 merely place claim 3 in independent form and, therefore, raise no new issues. In addition, it is believed that claim 1, as amended, is allowable, and entry of the amendments to claims 1 and 3 is respectfully requested pursuant to 37 C.F.R. §1.116.

Response to §103 Rejections

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Furthermore, a reference "teaches away" from the claimed invention and should not be used to reject the claimed invention under §103 "when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 2 F.3d 551, 31 U.S.P.Q.2d 1130, 1131 (Fed. Cir. 1994).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Wilson* in view of *Kurtenback*. Claim 1, as amended, reads as follows:

> 1.   In an iconic programming system, wherein the iconic programming system contains an existing network of connected icons, a computer-implemented method for tracing the execution of icons, the method comprising the steps of:
> executing a plurality of the icons;
> ***setting a flag for each icon executed in the executing step,*** the flag corresponding with the each icon; and
> ***simultaneously highlighting each icon corresponding with each flag set in the setting step.*** (Emphasis added.)

Applicant respectfully asserts that the combination of *Wilson* and *Kurtenbach* fails to suggest or teach at least the features of pending claim 1 highlighted hereinabove and that the combination is, therefore, inadequate to render pending claim 1 obvious.

In this regard, *Wilson* appears to describe an iconic programming system capable of highlighting the icon being executed during execution. In *Wilson*, a trace command causes an iconic programming system to identify the icon "whose instructions are *currently* being executed" and to highlight this icon. Col. 9, lines 58-60, (emphasis added). See also col. 10, lines 6-58. Therefore, *Wilson* facilitates the debugging process by enabling a programmer to locate the icon associated with the instruction or set of instructions currently being executed by the iconic programming system. However, *Wilson* fails to teach that other icons should be highlighted and, therefore fails to suggest the features of pending claim 1 highlighted hereinabove.

In addition, *Kurtenbach* also appears to describe an iconic programming system capable of highlighting the icon being executed during execution. However, similar to *Wilson*, the icon being executed is apparently the only icon that is highlighted. See col. 7, lines 40-41. In fact, *Kurtenbach* specifically teaches that the icons should be

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highlighted "to provide the user visual feed back concerning which command is *currently* being executed." Abstract (emphasis added). Therefore, *Kurtenbach* fails to teach or suggest that icons, other than the one being exucuted, should be highlighted. Accordingly, *Kurtenbach*, like *Wilson*, fails to suggest the features of pending claim 1 highlighted hereinabove.

As a result, it appears that *Wilson* and *Kurtenbach* may make it easier for a user to determine which icon is presently executing but are less useful when an execution run is terminated. In this regard, execution of the icons often fails at some point due to errors in the instructions of the icons. The present invention recognizes that it may be beneficial for a programmer during debugging to see which icons have and have not executed during an execution run that previously failed. Therefore, the methodology of the present invention, as defined by claim 1, sets a flag for each icon executed during the execution run so that the icons that actually executed during execution can be later highlighted. This is contrary to *Wilson* and *Kurtenbach* which teach that only the icon currently being executed is highlighted. Accordingly, Applicant respectfully submits that the combination of *Wilson* and *Kurtenbach* fails to suggest or teach each feature of pending claim 1 and asserts that the rejection to this claim should be withdrawn.

Teaches Away

Applicant further submits that the teachings of *Wilson* and *Kurtenbach* would discourage one skilled in the art from implementing the features of the present invention, as defined by pending claim 1. Therefore, *Wilson* and *Kurtenbach* "teach away" from the present invention and should not be used to reject the present invention under 35 U.S.C. §103.

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As set forth hereinabove, *Wilson* discloses an iconic programming system capable of highlighting the icon "whose instructions are currently being executed." Col. 9, lines 58-60. In this regard, only the executing icon is highlighted so that a programmer can quickly identify the executing icon.

However, if each icon that has been executed is simultaneously highlighted, as described by pending claim 1, then it could be difficult for a programmer to determine which icon is *currently* being executed, especially considering that an icon can be executed more than once as the iconic program branches and loops. Therefore, upon reading *Wilson*, one ordinarily skilled in the art would be discouraged from simultaneously highlighting each executed icon, as described by pending claim 1, and pursuant to *In re Gurley*, *Wilson* should not be used to reject claim 1, as presently set forth.

Furthermore, for the same reasons, one skilled in the art would be discouraged from simultaneously highlighting each icon executed in the *Kurtenbach* system. In fact, *Kurtenbach* specifically teaches that "as the execution sequences a different icon is highlighted." Col. 7, lines 47-48. This is in contrast to the features of pending claim 1, which state that the executed icons should be simultaneously highlighted. Accordingly, upon reading *Kurtenbach*, one ordinarily skilled in the art would be discouraged from simultaneously highlighting each executed icon, as described by pending claim 1, and pursuant to *In re Gurley*, *Kurtenbach* should not be used to reject claim 1, as presently set forth.

Claim 2

Claim 2 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Wilson* in view of *Kurtenbach*. Applicant submits

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that the pending dependent claim 2 contains all features of its respective independent claim 1. Since claim 1 should be allowed, as argued hereinabove, pending dependent claim 2 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 3

Claim 3 presently stands rejected in the Office Action under 35 U.S.C. §103 as purportedly being unpatentable over *Wilson* in view of *Kurtenbach*. However, pending claim 3 includes the steps of "receiving an input subsequent to the executing step" and ***"performing the highlighting step in response to the receiving step."*** (Emphasis added). Applicant respectfully submits that the combination of *Wilson* and *Kurtenbach* is inadequate to render at least these features obvious.

In particular, as set forth hereinabove in the arguments for allowance of pending claim 1, both *Wilson* and *Kurtenbach* are both generally concerned with highlighting the icon that is presently being executed. As a result, it would not be obvious to one skilled in the art that the highlighting step should be performed in response to an input that is received *after the icons have been executed*, as described by pending claim 3. Therefore, both *Wilson* and *Kurtenbach* are inadequate to render each feature of pending claim 3 obvious.

Teaches Away

Furthermore, Applicant respectfullys assert that both *Wilson* and *Kurtenbach* teach away from the features of pending claim 3. As previously set forth, both *Wilson* and *Kurtenbach* disclose an iconic programming system capable of highlighting the icon presently being executed so that this icon can be easily identified.

However, if the icons that have already been executed are highlighted, as described by pending claim 3, then it could be difficult for a programmer to determine which icon is *currently* being executed. Therefore, upon reading *Wilson* and/or *Kurtenbach*, one ordinarily skilled in the art would be discouraged from highlighting icons "in response to" an input received "subsequent to the executing step," as described by pending claim 1, and pursuant to *In re Gurley*, neither *Wilson* nor *Kurtenbach* should not be used to reject claim 3, as presently set forth.

Since the combination of *Wilson* and *Kurtenbach* is inadequate to render each feature of pending claim 3 obvious and since both *Wilson* and *Kurtenbach* teach away from the features of pending claim 3, Applicant submits that the rejection to claim 3 is improper and should be withdrawn, notwithstanding the allowability of pending claim 1.

Claim 4

Claim 4 presently stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Wilson* in view of *Kurtenbach*. Claim 4 presently reads as follows:

> 4. In an iconic programming system, wherein the iconic programming system contains an existing network of connected icons, a computer-implemented method for tracing the execution of icons, the method comprising the steps of:
> executing a plurality of the icons;
> indicating which of the icons are executed in the executing step;
> ***determining, subsequent to the executing step and based on the indicating step, that the plurality of icons have been executed***; and
> ***highlighting the plurality of executed icons in response to the determining step***. (Emphasis added).

Applicant respectfully asserts that the combination of *Wilson* and *Kurtenbach* fails to suggest or teach at least the features of pending claim 4 highlighted hereinabove and that the combination is, therefore, inadequate to render pending claim 4 obvious.

As set forth hereinabove in the arguments for allowance of pending claims 1 and 3, both *Wilson* and *Kurtenbach* highlight an icon that is being executed so that a user can easily determine which icon is executing. The present invention, however, is generally concerned with helping a user to debug an iconic program by indicating which of the icons previously executed during a run of the program. As a result, unlike the prior art of record, the highlighting of the icons occurs during the debugging phase, which often occurs *after* execution. In this regard, pending claim 4 requires the highlighting step to be performed "in response to" the determining step, which occurs "subsequent to the executing step." As a result, a plurality of icons is highlighted *after* the plurality of icons is executed.

Therefore, for reasons similar to those set forth in the arguments for allowance of pending claims 1 and 3, Applicant respectfully submits that the combination of *Wilson* and *Kurtenbach* fails to suggest and, in fact, teaches against the features of pending claim 4 highlighted hereinabove. Accordingly, Applicant submits that the rejection of claim 4 is improper and requests that this rejection be withdrawn.

Claims 5 and 6

Claims 5 and 6 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Wilson* in view of *Kurtenbach*. Applicant submits that the pending dependent claims 5 and 6 contain all features of their respective independent claim 4. Since claim 4 should be allowed, as argued hereinabove, pending dependent claims 5 and 6 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Furthermore, similar to pending claim 3, claim 6 presently includes the steps of "receiving an input subsequent to the executing step" and "performing the determining

step in response to the receiving step." For reasons similar to those set forth in the arguments for allowance of pending claim 3, Applicant submits that the combination of *Wilson* and *Kurtenbach* fails to suggest and, in fact, teaches against the foregoing features of pending claim 6. As a result, the rejection to claim 6, as presently set forth, is improper and should be withdrawn, notwithstanding the allowability of pending claim 4.

Claim 7

Claim 7 presently stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Wilson* in view of *Kurtenbach*. However, similar to pending claim 4, claim 7 presently includes the steps of "determining, subsequent to the executing step and based on the indicating step, that the plurality of icons have been executed" and "highlighting the plurality of executed icons in response to the determining step." For the same reasons set forth in the arguments for allowance of pending claim 4, Applicant respectfully asserts that pending claim 7 is allowable and that the rejection to claim 7 should, therefore, be withdrawn.

Claims 8 and 9

Claims 8 and 9 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Wilson* in view of *Kurtenbach*. Applicant submits that the pending dependent claims 8 and 9 contain all features of their respective independent claim 7. Since claim 7 should be allowed, as argued hereinabove, pending dependent claims 8 and 9 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Furthermore, similar to pending claim 3, claim 9 presently includes the steps of "receiving an input subsequent to the executing step" and "performing the determining

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step in response to the receiving step." For reasons similar to those set forth in the arguments for allowance of pending claim 3, Applicant submits that the combination of *Wilson* and *Kurtenbach* fails to suggest and, in fact, teaches against the foregoing features of pending claim 9. As a result, the rejection to claim 9, as presently set forth, is improper and should be withdrawn, notwithstanding the allowability of pending claim 7.
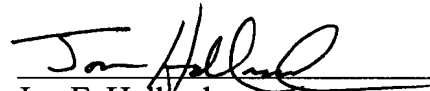
CONCLUSION

Applicant respectfully requests that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicant's response, the Examiner is encouraged to telephone Applicant's undersigned counsel.
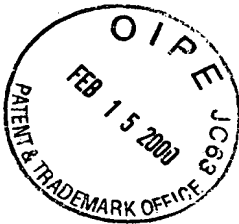
Respectfully submitted,

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